

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference DNI-0024-PCT		Date of mailing <i>(day/month/year)</i> 07 NOV 2007
International application No. PCT/US04/13340		International filing date <i>(day/month/year)</i> 30 April 2004 (30.04.2004)
International Patent Classification (IPC) or both national classification and IPC IPC: C06C 5/00(2006.01),5/04(2006.01) USPC: 102/275.3		Priority date <i>(day/month/year)</i> 30 April 2003 (30.04.2003)
Applicant DYNO NOBEL INC		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application


2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 23 July 2007 (23.07.2007)	Authorized officer Michael Carone  Telephone No. 571-272-6873
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Form PCT/ISA/237 (cover sheet) (April 2005)

WRITTEN OPINION OF THE
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International application No.

PCT/US04/13340

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in electronic form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

I. Statement

Novelty (N)	Claims <u>1-27</u>	YES
	Claims <u>NONE</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-27</u>	NO
Industrial applicability (IA)	Claims <u>1-27</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1-27 lack an inventive step under PCT Article 33(3) as being obvious over Knowlton et al. (US 2002/0035945 A1) in view of Manzara (US 5,681,904). Knowlton et al. disclose the invention substantially as claimed including delay compositions used in an initiator application, the delay composition comprising a resin such as vinyl alcohol acetate resin (see abstract; page 8, paragraph [0080]). However, Knowlton et al. does not specifically list the polymer GAP. Manzara '904 discloses a reactive polymer material, such as GAP resin that has been cross linked with a multifunctional dipolarophile material, which can be used in applications requiring a high energy material (see abstract; col. 1, lines 10-23; col. 2, lines 9-25). Arpin et al. '627 disclose GAP polymer added to the initiation portion of a detonator (abstract; col. 7, lines 10-22). In view of either Manzara or Arpin et al. it would have been obvious to one of ordinary skill in the art to select GAP polymer as the delay composition of the Knowlton et al. initiator because to do so would only utilize a well known reactive polymer in a well known application, such as in a delay composition of an initiator or detonator or fuse.

Claims 1-27 meet the criteria set out in PCT Article 33(4), and thus claims 1-27 possess industrial applicability because the subject matter claimed can be made or used in industry.